

31. (original) The cover of claim 22, wherein said planar top surface is rigid to facilitate the formation of a vacuum seal.

### **Remarks**

The Office Action mailed July 18, 2003 and made final has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-9 and 11-31 are now pending in this application, of which Claims 1, 12, and 22 have been amended. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 1, 12 and 22 have been amended for clarity in light of the final office action, and it is not believed that the amendments to the claims present a new issue requiring further searching and consideration of the prior art.

The rejection of Claims 12, 13, 15, 19, 21-23, 25, 29 and 31 under 35 U.S.C. § 102(b) as being anticipated by German (U.S. Patent No. 5,168,995) is respectfully traversed.

German describes a pinch clip lid for non-hermetic integrated circuit packages, such as charge-coupled device imagers, including a windowed lid over an exposed area of the electronic component within the package. The pinch clip lid includes a step lid (10) and cover (20). The step lid (10) includes a peripheral notch (16) which defines a centering portion (18) that fits within a shoulder of a non-hermetic package (40) to center the lid on the package, and a large central aperture (12) with a shelf (14) on which a transparent window (32) in the form of a glass plate is attached. The window (32) is held in place by the cover (20).

Independent Claim 12 recites an electrical component cover, comprising "an integrally formed body section having opposite peripheral edges, opposed end edges, and a planar top surface extending therebetween, said top surface configured to form a vacuum seal with a tool for automatically assembling electrical components to other structures," "said integrally formed

body section including a flange provided along at least one of said peripheral edges of said body section, said flange being configured to prevent preventing movement of an upper end of an electrical component relative to said body section in at least one direction parallel to said top surface," and "said integrally formed body section including a release arm integrally formed with extending from at least one of said opposed end edges of said body section, said release arm being configured to releasably retain an electrical component."

German does not describe an integrally formed body section having opposite peripheral edges, opposed end edges, and a planar top surface extending therebetween, said top surface configured to form a vacuum seal with a tool for automatically assembling electrical components to other structures as recited in Claim 12. Rather, German describes a three piece lid construction having a lid (10), a window (32) in the lid, and a cover (20) to maintain the window in place. German nowhere describes that the pinch clip lid is configured to form a vacuum seal with a tool. It is apparent from the Figures of German that even if a vacuum seal tool was used with the lid described by German, because the window (32) defines virtually the entire top surface area of the lid assembly, the vacuum seal of the tool would engage the window (32) rather than the separate structure of the cover (20) which holds the window in place. That is, only the window (32) provides a viable engagement surface for a vacuum seal tool if one were to be employed. The peripheral area of the cover (20) surrounding the window (32) is not believed to be sufficient for engagement with a vacuum seal tool due to its relatively small size, and an unbalanced load on the tool and bending stresses in the cover due to engagement of a vacuum seal tool to the periphery of the cover would be problematic to reliable and consistent placement of the cover and associated electronic package via the tool.

Moreover, it is submitted that the presence of the window (32) described by German reduced to the cover during pickup and placement by a tool engaged to the window would be borne predominately in the glass window, which is the least structurally capable component in German's lid to withstand the applied forces and stress.

Further, German describes that the windowed lid provides visual inspection of the exposed electronic component within the package. Therefore, reducing the size of the window and enlarging the top surface area of the cover to accommodate a vacuum seal on the metal portion of the cover would be undesirable as defeating visual inspection of electronic components through the window. Likewise, maintaining the size of the window and enlarging the cover to form a larger top surface area of the cover to accommodate a vacuum seal would be undesirable as the lid would occupy a greater space on a crowded circuit board. German notes that space constraints sometimes requires undesirable removal of lids before installation to an electronic package. See German col. 1, lines 25-36. Increasing the size of the lid would appear to increase the likelihood of its removal prior to installation of the electronic package and further defeat the application of vacuum seal tools.

German also does not describe an integrally formed body section including a release arm extending from at least one of opposed end edges of the body section, the release arm configured to releasably retain an electrical component as recited in Claim 12. The assertion in the Office Action that German discloses that "the component retention member (30) is formed integral with an end of the body section" in Figure 4 is respectfully traversed. German describes side bars (30) which are separately fabricated from and attached to the cover (20) at tabs (28) by suitable means, such as spot welding. The cover (20) is separately fabricated from and coupled to a body of the lid (10). See German col. 2, lines 34-54. Hence, the side bars (30) are not integrally formed with the lid (10) or the cover (20).

Furthermore, German does not describe an integrally formed body section including a flange provided along at least one of said peripheral edges of said body section, said flange preventing movement of an upper end of an electrical component relative to said body section in

cludes a central aperture (22) with four side portions (24, 25, 26, 27) extending from opposing sides (24) are bent underneath the step lid (10) to secure the cover (20) to the step lid (10). German does not describe or suggest that the tabs (26) or the sides from which they depend

prevent relative movement of the cover relative to the electronic package as recited in Claim 12. Only the centering portion (18) of the lid (10), which is separately provided from the cover (20), precludes relative movement of the cover in a direction parallel to the top surface of the cover when fitted within a shoulder of a non-hermetic package (40).

For at least the reasons set forth above, Claim 12 is respectfully submitted to be patentable over German.

Likewise, the recitations of Claims 13, 15, 19, and 21, when considered in combination with the recitations of Claim 12, are submitted to be patentable over German.

Independent Claim 22 recites an electrical component cover, comprising "an integrally formed body section having peripheral edges and a planar top surface extending between said peripheral edges, said top surface configured to form a vacuum seal with a tool for automatically assembling electrical components to other structures;" and "said integrally formed body section including a release arm extending from at least one of said opposed edges of said body section, said release arm configured to releasably retain an electrical component and configured to engage an electric component to hold an electric component a desired distance from said body section."

For the reasons set forth above, German does not describe an integrally formed body section having a planar top surface configured to form a vacuum seal with a tool, but rather describes a three piece construction having a window which is detrimental to the use of a vacuum seal tool. Also, for the reasons set forth above, German does not describe integrally formed body section including a release arm extending from at least one of said opposed edge of the body section configured to releasably retain an electrical component, but rather describes

For at least the reasons set forth above, Claim 22 is respectfully submitted to be patentable over German.

Likewise, the recitations of Claims 23, 25, 29 and 31, when considered in combination with the recitations of Claim 22, are submitted to be patentable over German.

Moreover, Claims 19 and 29 recite that the body section is injection molded with opposite ends molded integral with end walls of said release arm, the end walls extending in a direction transverse to a plane containing said planar top surface, and the end walls extending laterally along the opposite ends. German describes a cover (20) formed from sheet metal with separately attached side bars (30) to disengage the cover (20). Claims 19 and 29 are respectfully submitted to be neither described nor suggested by German.

Claims 21 and 31 recite that the planar top surface is rigid to facilitate the formation of a vacuum seal. As noted above, German nowhere describes a vacuum seal in conjunction with the cover (20), and the cover (20) described by German includes a window that would defeat the use of a vacuum seal. Claims 21 and 31 are respectfully submitted to be neither described nor suggested by German.

For the reasons set forth above, Applicants respectfully request that the rejection of Claims 12, 13, 15, 19, 21-23, 25, 29 and 31 under 35 U.S.C. § 102(b) as being anticipated by German (U.S. Patent No. 5,168,995) is respectfully traversed.

The rejection of Claims 1-4, 6-8 and 11 under 35 U.S.C. § 103 as being unpatentable over German in view of Dechelette (U.S. Patent No. 4,512,619) is respectfully traversed.

Dechelette describes an insulation displacement terminal for an electrical connector. Similarly, Dechelette does not describe an electronic package and Dechelette does not describe a cover for an electronic package. Dechelette is submitted to have no relation to the presently claimed invention and adds nothing to the teaching of German with respect to the instant invention. It is respectfully submitted for the reasons below that Dechelette fails to cure the

deficiencies of German with respect to Claim 1, and the cited reference are submitted to collectively fail to describe or suggest each limitation of Claim 1.

Claim 1 recites a cover connectable to an electrical component to assist a tool in assembling the electrical component to another structure, the cover comprising "a stamped metallic body section having a top surface and a component retention member, said top surface configured to form a vacuum seal with a tool, said component retention member extending from an end of said body section for releasably securing said body section to an electrical component."

It is respectfully submitted that German in view of Dechelette is not suggestive of Claim 1. Specifically, German in view of Dechelette collectively fail to disclose each of the recited limitations of Claim 1.

As noted above, German does not describe a stamped metallic body section having a top surface and a component retention member. Rather, German describes a sheet metal cover (20) with separately provided side bars (30) attached thereto with suitable means such as welding. The side bars (30) are not fairly characterized as a part of a stamped metallic body section. Likewise, Dechelette does not describe a cover connectable to a component, and does not describe a body having a component retention member as recited in Claim 1. Neither of the cited references describe a cover connectable to a component.

Moreover, German does not describe a stamped metallic body having a top surface configured to form a vacuum seal with a tool, but rather describes a three piece lid assembly including a body, a glass plate window in the body, and a cover which holds the glass plate in place. Because the window defines substantially the entire top surface of the lid assembly, it is submitted that the metal cover (20) of the lid assembly described by German does not include a top surface configured to form a vacuum seal with a tool. The construction of the lid assembly described by German appears to teach away from the use of vacuum tools and any modification of the construction thereof which may render the lid assembly suitable for placement by vacuum seal tools. Likewise, Dechelette does not describe a

surface configured to form a vacuum seal with a tool. Neither of the cited references describes or suggests a surface configured for use with a vacuum tool.

Claim 1 is therefore submitted to be patentable over German in view of Dechelette.

Likewise the recitations of Claims 2-4, 6-8 and 11, when considered in combination with the recitations of Claim 1, are submitted to be patentable over German in view of Dechelette.

For the reasons set forth above, Applicants respectfully request that the rejection of Claims 1-4, 6-8 and 11 under 35 U.S.C. § 103 as being unpatentable over German in view of Dechelette be withdrawn.

The rejection of Claims 5 and 9 under 35 U.S.C. § 103 as being unpatentable over German in view of Dechelette and further in view of Miyazawa is respectfully traversed.

Claims 5 and 9 depend from Claim 1, which is submitted to be patentable for the reasons set forth above. When the recitations of Claims 5 and 9 are considered in combination with the recitations of Claim 1, Claims 5 and 9 are likewise submitted to be patentable over the cited art.

For the reasons set forth above, Applicants respectfully request that the rejection of Claims 5 and 9 under 35 U.S.C. § 103 as being unpatentable over German in view of Dechelette and further in view of Miyazawa be withdrawn.

The rejection of Claims 14, 17, 18, 24, 27, and 28 under 35 U.S.C. § 103 as being unpatentable over German is respectfully traversed.

Claims 14 and 24 recite a catch surface configured to be secured to a bottom of an electric component to retain the body section on an electric component. German describes a pair of attachment tabs (28) extending from sides (24) of the cover (20) which engage flat and smooth sides of a component package (40) without contacting a bottom of the component package. See German Figures 4 and 6. Only the bias of the side bars (30) engages the pinch lid described by

German to the electronic package (40), and resultant pressure applied by the side bars (30) to the sides of the electronic package (40) holds the lid in place.

The characterization in the Office Action that providing a catch surface to the lid described by German would be a mere change in the size of the component is respectfully traversed. A catch surface configured to be secured to a bottom of an electrical component would entail a change in shape, and not merely a change in size, of the attachment tabs (28) or side bars (30) of the cover (20) described by German. Based upon the German figures, the only manner in which the side bars (30) could be secured to the bottom of the electrical component would be to increase the length of the side bars (30) without a corresponding increase in dimension of the cover (20). That is, the dimension of the side bars (30) would have to be disproportionately scaled relative to the cover to provide a catch surface for the bottom of a component. A motivation to make the requisite change in shape is nowhere apparent from German.

Moreover, nothing in the text or illustrations of German suggests that a catch surface secured to a bottom surface of an electrical component would be desirable or advantageous, and therefore it is submitted that German is not suggestive of the recited catch surface. Claims 14 and 24 are therefore submitted to be patentable over German.

Likewise, with respect to the assertion that the recitations in Claims 17 and 27 involve a mere change in size of the component's angle, it is respectfully submitted that the modification of the German reference to the invention claims in Claims 17 and 27 entails a change in shape of the components that is not described, suggested or motivated by the German reference. Claims 17 and 27 are therefore submitted to be patentable over German.

(18) of the pinhead as a stop beam configured to engage an electrical component. However, German describes that the centering portion (18) is received in a shoulder of the electronic package, and the lid is held to the package with the side rails (30) and attachment tabs (28) on the



sides of the package. The centering portion (18) of the lid (10) is received in a shoulder in the package (40) such that there is no separation between the pinch lid and the electronic package when the pinch lid is installed. Claims 18 and 28 each recite that the stop beams are configured to engage an electric component to hold an electric component at a desired distance from the body section. The centering portion (18) described by German does not hold an electronic component in any aspect, but rather rests within or upon the electronic package (40).

Further, with respect to the assertion that providing a stop beam with an acute angle to the top surface involves a mere change in size of the component's angle, it is respectfully submitted that the modification of the German reference to the invention claims in Claims 18 and 28 entails a change in the shape of the components that is not described, suggested or motivated by the German reference.

For at least the reasons set forth above, Claims 18 and 28 are submitted to be patentable over German.

For the reasons set forth above, Applicants respectfully request that the rejection of Claims 14, 17, 18, 24, 27, and 28 under 35 U.S.C. § 103 as being unpatentable over German be withdrawn.

The rejection of Claims 16, 20, 26 and 30 under 35 U.S.C. § 103 as being unpatentable over German in view of Miyazawa is respectfully traversed.

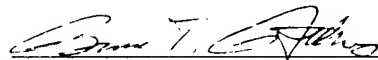
Claim 16 and 20 depend from Claim 12, and when the recitations of Claims 16 and 20 are considered in combination with the recitations of Claim 12, Applicants submit that Claims 16 and 20 likewise are patentable over the cited art.

For the reasons set forth above, Applicants respectfully request that the rejection of Claims 16, 20, 26 and 30 under 35 U.S.C. § 103 as being unpatentable over German in view of Miyazawa be withdrawn.

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In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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